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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,778	10/22/2003	Naoki Abe	CHA920030025US1	1597
23550 7590 11/20/2008 HOFFMAN WARNICK LLC 75 STATE STREET 14TH FLOOR ALBANY, NY 12207			EXAMINER MURDOUGH, JOSHUA A	
			ART UNIT 3621	PAPER NUMBER
			NOTIFICATION DATE 11/20/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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PTOCommunications@hoffmanwarnick.com

Office Action Summary	Application No. 10/690,778	Applicant(s) ABE ET AL.	
	Examiner JOSHUA MURDOUGH	Art Unit 3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 12-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/22/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgements

1. This action is responsive to Applicants' election received 29 August 2008
2. Claims 1-37 are pending.
3. Claims 12-37 are withdrawn herein.
4. Claims 1-11 have been examined.

Election/Restrictions

5. Applicant's election of species A, Group 1 in the reply filed on 29 August 2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

6. Applicants allege that claims 1-20 and 35-37 read on species A. However, claims 12-20 recite a "confederated fraud detection system." As per Applicants' figures, the "Confederated Fraud Detection System 40" is shown in Figure 2. Figure 2 was the basis for species B. Also, claims 35-37 recite a "distributed fraud detection system." As per Applicants' figures, the "Distributed Fraud Detection System 80" is shown in Figure 3. Figure 3 was the basis for species C. Therefore, these claims are considered to read on species B or C and not species A.

7. Claims 12-37 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention or species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 29 August 2008.

Claim Rejections - 35 USC § 112 1st Paragraph

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-11 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

10. Claim 1 recites, “tamper-proof” in line 3. As discussed in paragraph 2 on the 3rd page of the specification, Applicants take steps to sense and create evidence when tampering is detected. However, the disclosed steps are not sufficient to show possession of an algorithm that makes the device “tamperproof.” “Tamperproof” is an absolute standard which means it is impossible to tamper with the device. “Tamper resistant” is not so absolute. It only implies that steps are taken to prevent tampering. As both are used in the specification and only “tamper resistant” is enabled, the Examiner has interpreted the occurrences of “tamperproof” as being “tamper resistant” when applying the prior art. If Applicants amend to use “tamper resistant” in place of “tamper-proof” this rejection will be withdrawn.

Claim Rejections - 35 USC § 112 2nd Paragraph

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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12. Claims 1-11 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

13. Claim 1 recites "computing environment" in line 4. One of ordinary skill in the art would not recognize what the structure of this limitation is in order to know if they are infringing. For purposes of prior art, a "computing environment" has been interpreted by the Examiner as being software that allows other software to be executed.

14. Claim 1 recites "a secure data processing unit" in line 3. It is the Examiner's position that Applicants have not lexicographically defined this phrase. Therefore, limitations from the specification cannot properly be brought into the claims. One of ordinary skill in the art would not recognize the corresponding structure for this unit is in order to know if they are infringing.

15. Alternately, if Applicants' description of the SDPU found on page 3, paragraph 1 of the specification were considered to be a lexicographic definition, it would not be understood if two instances of each of the "security system," "analysis system," "plurality of surveillance algorithms," and "selection program" would be present or if one is sufficient.

16. Claims 3 and 4 claims a system and a method, which renders the claim ambiguous. For examination purposes, the examiner will interpret these claims as being directed to a system only. Appropriate correction is required.

17. As to these two claims, the recitation of "utilizes" and "prevents" are interpreted as active steps. As the preamble clearly sets out the invention as a system and the recitation of active steps indicate the presence of a method, one of ordinary skill in the art would not understand if

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merely the possession of the structure is sufficient to infringe this claim or if the performance of the method steps is necessary as well.

18. Claim 6 recites, “to be analyze future imputed transactions” in line 10. This phrase does not make grammatical sense. However, the use of “to” followed by a function, as noted below, makes this limitation appear to be intended use. As also noted below, intended use “does not limit the scope of a claim or claim limitation.” Therefore, this limitation has been deemed to be non-limiting when applying the prior art.

19. Claim 4 recites the limitation "the operational behavior of the SDPU" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. The operational behavior has not been established, therefore, one of ordinary skill in the art would not know what the security system is preventing observation of.

20.

Claim Rejections - 35 USC § 101

21. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

22. Claims 3 and 4 are rejected under 35 U.S.C. §101 because the claim is directed to neither a “process” nor a “machine” but rather embrace or overlap two different statutory classes of invention set forth in 35 U.S.C 101 which is drafted so as to set the statutory classes of invention in the alternative only. For examination purposes, the examiner will interpret these claims as directed to a system only.

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Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

24. Claims 1, 2, 4-6, 8, 10, and 11, as understood by the Examiner, are rejected under 35 U.S.C. §103(a) as being unpatentable over Blumberg (US 6,240,415) in view of Silverbrook (US 6,317,192).

25. As to claims 1 and 6, Blumberg shows:

- a. A system for detecting fraudulent transactions, comprising:
- b. an interface for inputting transaction data **114** and outputting analysis results **104** (interface components: keyboard and monitor); and
- c. a security system (C 7, LL 38-50) that can restrict access to data and program execution;
- d. an analysis system **28** for analyzing inputted transactions;
- e. a plurality of surveillance algorithms (C 13, LL 37-49) stored in an encrypted database (C 10, LL 1-16); and
- f. a selection program (“operating system,” C 9, LL 10-17) for selecting at each of a sequence of random times a different surveillance algorithm to be used by the analysis system.

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26. Blumberg does not expressly show:

a secure data processing unit (SDPU) that provides a secret and tamper-proof computing environment

27. Silverbrook shows the use of tamper detection circuitry (Figure 177) and Message Authentication Codes (“MAC,” CC 145-146, LL 59-16) . Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the teachings of Blumberg to add the tamper detection circuitry and MAC's of Silverbrook. The tamper detection would allow for the verification of the device and messages and provide greater confidence in the security of the transaction.

28. As to claim 2, Blumberg further shows:

the SDPU further includes an algorithm performance system (“management console,” C 13, LL 58-61) that assists the selection program in selecting surveillance algorithms (“decision making is managed from the desktop,” Id.).

29. As to claims 4 and 10, Blumberg further shows:

the security system prevents observation of the operational behavior of the SDPU (Firewalls 20 and 30 prevent unauthorized access to the system).

30. As to claim 5, Blumberg further shows:

the security system includes an encryption system for encrypting and decrypting data (as the values and algorithms are encrypted, a system to perform the encryption and decryption is

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necessarily present).

31. As to claim 11, Blumberg further shows:

decrypting the selected surveillance algorithm (As the algorithms are encrypted, the decryption is necessarily present in order to execute them.).

32. Claims 3 and 7-9, as understood by the Examiner, are rejected under 35 U.S.C. §103(a) as being unpatentable over Blumberg and Silverbrook as applied to claims 1, 2, and 6 above, and further in view of Douceur (US 2004/0060042).

33. Blumberg further shows the use of alert messages (C 7, LL 48-49)

34. Blumberg does not expressly show:

- g. the selection program utilizes a random selection process for selecting surveillance algorithms;
- h. measuring a randomness of the algorithm selection process using a technique selected from the group consisting of correlation and entropy measures; and
- i. issuing an alert if the randomness goes under a predetermined threshold.

35. Douceur shows random selection [0050] with a predefined correlation coefficient (“rho,” [0067]) and the calculation of the correlation coefficient from already generated random values [0074]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the teachings of Blumberg to add the calculations and selection method of Douceur so that a comparison of the predefined rho and the calculated rho would trigger an alert as taught by Blumberg if the difference exceeded a threshold. The random

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selection of algorithms would allow for a more secure system through the use differing algorithms but with efficiency near that of just using one algorithm because only one is in use at a time. The alert would allow for a notice that the system is not operating properly or has become too predictable. If the system becomes predictable, the added security of the rotating algorithms is diminished.

Claim Interpretations

36. Claims 1-6 are understood to be apparatus claims. As such, they are subject to interpretation as outlined by MPEP § 2114, wherein it says, “While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function” and “[A]pparatus claims cover what a device is, not what a device does.” While the Examiner has cited references for some of the functional limitations that do not require an alteration of the structure for purposes of compact prosecution, it is his principal position that these elements do not need to be shown in order to show anticipation. It is suggested that the claims be amended to clearly show the structural elements to prevent issues associated with this type of interpretation.

37. Applicants are reminded that optional or conditional elements (*e.g.* claims 1 and 6 which recite “can restrict access to data and program execution”) do not narrow the claims because they can always be omitted. See *e.g.* MPEP §2106 II C.: “Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. [Emphasis in original.]”; and *In re Johnston*,

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435 F.3d 1381, 77 USPQ2d 1788, 1790 (Fed. Cir. 2006) (“As a matter of linguistic precision, optional elements do not narrow the claim because they can always be omitted.”).

38. If a positive recitation is desired and if Applicants' original specification supports such an amendment, the Examiner respectfully suggests amending the claim to recite this and similar limitations positively.

39. The Examiner also notes that claims 1-11 are replete with intended use statements. As noted in MPEP §2106 II C, “statements of intended use or field of use” is provided as an example of “[l]anguage that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure” which “does not limit the scope of a claim or claim limitation.” Use of the words “for” and “to,” especially when in the format, <structure> for/to <function>, are generally indicative of intended use. See definitions of “for” and “to” below. A few examples of this type of language include:

- j. “for inputting transaction data and outputting analysis results” in claims 1 and 6;
- k. “for selecting at each of a sequence of random times a different surveillance algorithm” in claim 1; and
- l. “to be used by the analysis system” in claim 1.

40. Applicants are encouraged to review all of their claims for this type of language and amend to make these limitations positive. One notable exception to the format above is the phrase “programmed to.” Use of this phrase is considered to impart structure in system claims. Thus, if Applicants’ specification supports such an amendment, the use of “programmed to” is strongly suggested in claims 1-6 in order to have full patentable weight given to the limitations.

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41. The Examiner has pointed out the above issues because corrections that effectively avoid them are also likely to get around the cited art. The Examiner has done his best to provide the most relevant art. Therefore, there is a very high likelihood of allowance of claims that correct these issues as well as overcome the non-art rejections above. Considering this, Applicants are suggested to review the withdrawn claims and amend them to be more commensurate in scope with the examined claims as rejoinder may be possible.

Definitions

42. To the extent that the Examiner's interpretations are in dispute with Applicants' interpretations, the Examiner hereby adopts the following definitions—under the broadest reasonable interpretation standard—in all his claim interpretations.¹ Moreover, while the following list is provided in accordance with *In re Morris* (127F.3d 1048, 44 USPQ2d 1023 (Fed. Cir 1997)), the definitions are a guide to claim terminology since claim terms must be interpreted in context of the surrounding claim language. Finally, the following list is not intended to be exhaustive in any way:

For: “1 a -- used as a function word to indicate purpose... b -- used as a function word to indicate an intended goal” Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., Springfield MA, 1986.

¹ While most definition(s) are cited because these terms are found in the claims, the Examiner may have provided additional definition(s) to help interpret words, phrases, or concepts found in the definitions themselves or in the prior art.

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To: “2a -- used as a function word to indicate purpose, intention, tendency, result, or end.” Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., Springfield MA, 1986.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA MURDOUGH whose telephone number is (571)270-3270. The examiner can normally be reached on Monday - Thursday, 7:00 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Fischer can be reached on (571) 272-6779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joshua Murdough
Examiner, Art Unit 3621

/ANDREW J. FISCHER/
Supervisory Patent Examiner, Art Unit 3621